

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number
WO 2005/047492 A1

(51) International Patent Classification⁷: C12N 5/02, 5/08,
A61K 35/12, A61P 25/28

(21) International Application Number:
PCT/SE2004/001663

(22) International Filing Date:
15 November 2004 (15.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/520,122 14 November 2003 (14.11.2003) US
60/520,123 14 November 2003 (14.11.2003) US

(71) Applicant and

(72) Inventor: OLSSON, Mats, J. [SE/SE]; Österplan 13,
S-753 31 Uppsala (SE).

(74) Agent: MÖRCH, Camilla; Ström & Gulliksson IP AB,
PO Box 7086, S-111 57 Stockholm (SE).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: MELANOCYTES IN THERAPY OF NEURODEGENERATIVE DISEASES

(57) Abstract: The present invention relates to an in vitro cultivation method for producing human melanocytes which are capable of melanin and/or L-dopa synthesis, and to various uses of said melanocyte(s). In one preferred aspect, the invention relates to the use of said melanocyte(s) in an autologous implantation method in a patient suffering from a neurodegenerative disease, e.g. Parkinson's disease. The invention also relates to a screening method comprising melanocyte(s) from said cultures, wherein substances are screened for which may in any way effect said melanocyte(s). Said substances may e.g. be neurotoxic, neuroprotective, or particularly lethal to melanocytes obtained from a patient suffering from Parkinson's disease. The present invention also relates to other uses of said melanocytes, all which are disclosed herein.



WO 2005/047492 A1